

CLAIMS

- 1 A method of laser deposition using a laser and deposition wire, the method characterised in that the original wire is heated and cross-sectionally reconfigured to increase the lateral dimension of the presented wire for greater overlap with a presented beam from the laser which melts the wire for deposition.
- 2 A method as claimed in claim 1 wherein the wire is reconfigured to an oval or rectangle or dumbbell or semi-circle or serrated top cross-section.
- 3 A method as claimed in claim 1 wherein the wire comprises a deposition powder core held within a retaining sheath.
- 4 A method as claimed in claim 1 wherein the heating is provided by induction.
- 5 A method as claimed in claim 1 wherein at least a presented surface of the wire is knurled or otherwise roughened to reduce reflectivity of the presented beam.
- 6 A method as claimed in claim 5 wherein the knurling or roughening of the wire is conducted prior to reconfiguration.
- 78 Laser deposition apparatus comprising a laser and means to present a deposition wire, the apparatus characterised in that means are provided to heat and cross-sectionally reconfigure the original wire in the lateral dimension whereby there is a greater range of acceptable angles of incidence for a presented laser beam in order to melt the presented wire and cause deposition.
- 8 Apparatus as claimed in claim 7 wherein the means of heating is by induction.

- 9 Apparatus as claimed in claim 7 wherein the apparatus includes means to knurl or otherwise roughen at least a presented surface of the presented deposition wire.
- 10 Apparatus as claimed in claim 7 wherein the apparatus includes press rollers presented about the wire in order to create in use the reconfiguration of that wire as the wire passes through the apparatus to be presented to the beam of the laser.